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PRIMITIVE THEORIES OF KNOWLEDGE: A STUDY IN LINGUISTIC PSYCHOLOGY.

INSPECTION of the words which, in various languages, express the idea "to know," reveals the fact that, with different peoples, these have sprung from different roots. In other words, there have been, as there are now, several primitive theories of knowledge, each basing itself upon one of the senses in particular, to the greater or less exclusion of some or of all of the rest.

The Zapotecs of the state of Oaxaca, whose ancestors were one of the half-civilised nations of old Mexico, had a very simple theory of knowledge. In their language, Dr. Brinton (*Amer. Antiq.*, 1893, p. 382) tells us: "The verb 'to know' is a reduplication of the first person of the personal pronoun, *na*, 'I'; *na-na*, 'to know,' literally, 'my mine,' 'that which is with me, essentially mine.' It is absolutely the same in the Huasteca dialect of the Mayan stock." The name *Nahuatl* (the plural *Nahua* is applied to the people themselves), by which the language of ancient Mexico is known, signifying "able, skilful, superior," is derived, according to the same authority, from "the monosyllable *na*, which, in several closely related linguistic stocks in Southern Mexico, means 'to know, knowledge.'"

Dr. Brinton points out the resemblance in these tongues between the word for "knowledge, know," and the pronoun of the first person, observing further: "The man possessed of knowledge is everywhere he who is able. He *can* because he *kens*. There is no need to teach the world the Baconian maxim: 'Knowledge is power'; it is always recognised." In our own language *can*, *ken*, *know*, are all closely related, but are not exactly the same word. *Can* and *know* (with German *können*, Latin *gnoscere*, Greek *γιγνώσκειν*, Sanskrit *jnā*) go back to a primitive Indo-European root *gen* (*gne*, *gno*), "to recognise, know," which by some authorities is thought to be kin with the radical *gen*, "to produce, bear," but the seeming identity may be quite accidental. *Ken*, cognate with German *kennen*, has come into English from the Scandinavian, and is really a causal verb signifying originally "to make to know," "to show," "to teach." From the root *gen* come ultimately the German *Kunst*, "art" (in the older language also "wisdom, skill"); the Greek *γνῶσις*, "knowledge"; the Latin *notion* (whence our "notion"), "making acquainted" (then "idea"); English *cunning*, "knowledge, skill" (now com-

monly with an implication of deceit or underhandedness), borrowed from the Icelandic. As Trench has pointed out (*Select Gloss.*, 1879, p. 63), the sense of "crooked knowledge" (Bacon already wrote: "We take *cunning* for a sinister or crooked wisdom") is not the earliest English meaning of the term, for Fox, in his *Book of Martyrs*, published in 1562, could say of the persons of the Trinity "all these three Persons are even in power, and in *cunning*, and in might." The modern American application of *cunning* to pictures, babies, birds, trees, houses, flowers, teeth, anything indeed, is a notional *tour de force*, a linguistic triumph, although it seems to have been largely anticipated in most of its senses by the writers of the Elizabethan era in England.

From the same Indo-European root *gen* is derived the Teutonic *kóni*, "knowing, wise," which, with some changes in sound and signification, appears in English *keen*, "sharp, eager, acute"; Icelandic *kænn*, "wise, experienced"; German *kühn*, "bold." The original implication of *keen* may have been "wise or able in battle," "skilled in the use of war-weapons," since, as Kluge (*Etym. Wörterb.*, 1894, p. 220) remarks, many of the intellectual and moral ideas of the primitive Teutons are based upon the experiences of war and combat,—out of the struggle for existence has grown the knowledge of men. Knowledge born of trial the Latins called *experientia*, "what one has gone through." Goethe, the great German poet, crystallised the old race-thought, when he declared that "experience is the only genuine knowledge." Science too, to-day, is genuine through experiment. We know only after we have *done*, or, at least, *tried*, *experimented*. The Greek *ἐμπειρία* (whence our *empiricism*), "experience, knowledge," comes from *πειρά*, "trial." The word *science*, through the Latin *scientia*, "knowledge, skill, expertness, science," comes from the verb *scire*, "to know (in the widest sense), understand, be skilled in." The primitive meaning of *scire* seems to have been "to distinguish, to discern,"—more primitively still, "to split, divide."

Back to the same Indo-European root we can trace our English word *skill*. Philosophy, as a branch of human knowledge, thus comes quite naturally by its "hair-splitting" proclivities. From a similar radical, with like meaning, are derived the Latin *certus* (whence our "certain," etc.), *cernere*, "to separate, distinguish, perceive, decide" (whence our "discern"), etc. The German *gescheit*, "wise, clever, sensible," is derived ultimately from the Indo-Germanic root *skhaid*, "to split, separate," and even to-day "*splitting* the difference" is often the cleverest way out of a dispute.

When we speak of "a *sapient* young man," "a *sapient* remark," "the Divine *Sapience*," we do not always remember the primitive meaning of these words. But the cognate *sapid*, *insipid*, give us the clue to their origin. The Latin *sapere* (whence the French *savoir*), before it came to signify "to be prudent, discreet, wise," "to know, understand," meant "to taste, savor, smack." It is an interesting fact that the French, who are pre-eminently the people of "taste," should have selected this particular Latin word as their general term for "to know." In Eng-

lish we still say "a *smack* of knowledge." The *sage*, for the word comes from the Latin *sapius*, is a man of "taste," therefore, as the *wise* man is one of "sight." It is worth remembering also that it was after "*tasting* of the fruit of the tree of *knowledge*," according to the Hebrew Scriptures, that the first human beings became as gods "*knowing* good and evil."

Sprachgefühl still makes us speak, with unconscious correctness, of "the *sagacity* of a hound." The words *sagacity* and *sagacious*, which connect themselves with the Latin adjective *sāgax* ("wise, sagacious, keen, acute, shrewd"); but, more primitively, "keen or quick scented") and the verb *sāgire* ("to perceive keenly by the senses, perceive, see acutely"; primitively "to scent out") are really smell-terms. The original sense of *sāgire* seems to have been "to scent out, trace, track"; and from the same old Aryan root *sāg* have been developed English *seek*, German *suchen* (Gothic *sokjan*) and their cognates. Here the knower is "the seeker after," "the scenter out," just as to-day among the Zulus of South Africa, the primitive sage or shaman is "the *smeller out* of witches." To the savage mind even in the world beyond the grave the final test of knowledge is sometimes *smell*. With the inhabitants of certain districts of Borneo the practice prevails of whispering a message into the ear of the dead, and M. Hose (*Geogr. Journ.*, 1893, p. 198) informs us: "Upon his [the funeral was that of a boy] arrival in Appo Leggan (i. e., Hades) they would probably greet him in terms such as these: 'O Grandchild, it was for you the gong was beating, which we heard just now. What have you brought? How are they all up above? Have they sent any messages?' The new arrival then delivers the messages entrusted to him, and gives the cigarettes [which, rolled up in a piece of banana-leaf, have been placed in his hand] as proof of the truth of what he says. These cigarettes retain the *smell* of the hands which made them, which the dead relations are able to recognise."

Dr. D. G. Brinton (*Pursuit of Happiness*, 1893, p. 132) calls attention to the fact that of old the pleasures of the sense of smell "were considered the most delightful of all, even to Divinity itself." Hence the "sweet savor" which Jahveh liked to smell, the "odor of sanctity," etc., besides the countless metaphors and similes, alike in literature and in folk-thought in which the sense of smell or the nose figures as the representative of what is pleasantly perceived or known. Our words *smell* and *perfume* literally "end in *smoke*,"—for "smoke" is their ultimate signification. Curiously enough, *Geruch*, the German word for the sense of smell, has a similar origin, going back, with *riechen* ("to smell"), our English *reek*, and the German substantive *Rauch*, "smoke," to a Teutonic radical *ruck*, whose primitive meaning is "to smoke." The German word for "taste," *Geschmack*, is of mixed physiological and psychological heredity,—the Middle High German *smac* signified "taste, smell, scent."

The English *scent* is derived from Latin *sentire*, "to feel, perceive by the senses, hear, see, smell, taste,"—a word of broad meaning psychically and physio-

logically. Of like broad significance is the Latin *sensus*, whence our *sense*, with its cognates in other languages, borrowing from the Latin or Romance tongues. *Sentire*, as Kluge notes, is related to the Irish *séit*, "way, path," the Latins having given to the idea of "feeling one's way" (as we even yet term it in English) an abstract turn. *Sinn*, the German word for "sense" has a like origin. Together with *sinnen*, which in Old High German had the meaning "to travel, strive to go,"—possibly the later meaning of the word has been influenced by the Latin *sensus*,—the word *Sinn* comes from the Teutonic root *sinthia* ("road, journey"), seen in Gothic *sintis* and cognate with Irish *séit*, all of which, with the Latin *sentire*, go back to a primitive Indo-European radical, of which the branches are *sent-* "to direct towards, think of," *sento*, "path, way," and *sen*, "to go, travel, strive, think."

The idea of *thought* as *travel* is known to not a few primitive peoples, and modern *telepathy* revives the old conception. When we say "there is no royal road to learning," we are repeating an ancient story. The "avenues of the senses" are older than physiological psychology. In the religions and philosophies of the world, "ways" have been very prominent. We have the "Royal Path" and the "Heavenly Path" of Confucius, the *Taou* or "Way" of Laou-Tze, the "Noble Path" ("Four Paths") of Buddhism, the "Way" of Christianity, etc. Moreover, the *Pontiff* of the Roman Church, as his Latin name, *pontifex*, indicates, had a predecessor, who was simply "the pathmaker." *πείρα*, the root of the Greek *εμπειρία*, "experience, knowledge," is connected with *πόρος*, "a way" and our English *fare*.

The *philosopher* and the *sophist*, if we trust the accepted etymologies of these words, are both men of "taste." For the Greek *σοφία*, "wisdom," *σοφός*, "skilful, intelligent, wise," are close kin of *σάφης*, "clear, sure, unerring," a term applied to seers, etc. As the Greek word *σάπως* ("juice, sap produced by incision"), the equivalent of the Latin *sapor*, proves, both *σοφός* and *σάφης* must have meant originally "of a keen, decided taste," "tasty," and then, secondarily, "clear, evident, sure unerring, wise." Colloquial American English, with its *sappy* and *saphead*, seems to have gone in the opposite direction to ancient Greek.

We have in English a famous children's rhyme, "Open your mouth, and shut your eyes, And I'll give you something to make you wise." Here taste and wisdom are correlated. The etymology of *wisdom* and *wise* does not, however, bear out the inference of the rhyme. English *wise* and its cognates in the various Teutonic languages (German *weise*, etc.) are verbal adjectives from the Indo-European radical *wid* or *wit*, "to know," which has likewise produced the English "to *wit*" and the German *wissen*, besides the Latin *videre*, "to see," which latter reveals the original meaning of the root—"to know" is "to see." The noun *wit*, which survives in a special sense in English (compare German *Witz*, etc.), is, therefore, etymologically at least, "sight," and "first sight," perhaps, not the "second sight" of the folk. From the same root come ultimately *witch* and *wiseacre*, the

last borrowed from Dutch, and replacing the Anglo-Saxon *witiga*, "prophet, soothsayer, wizard, seer," of which *witch* is a corruption. *Wizard*, too, belongs in the same category. In Modern High German the adjective *weis* also occurs, in the phrase "einem etwas *weis* machen," meaning "to hoax anybody." The extension of meaning of *wit* still survives in "to have one's *wits* about him," and the plural "*wits*" continues to be used as a synonym for "senses." Tennyson says:

"Alone and warming his five wits,
The white owl in the belfry sits."

When we cannot "see our way clear" to do anything, we are said to be "at our wits' end." The English *seer*, "prophet, wise man," is a nobler term than the similarly originating *clairvoyant* and cognates of these later days. The colloquial American *see!* belongs in this category also. German *naseweis*, "pert, saucy, inquisitive" (literally, "nose-wise") is also of interest here. But German has likewise *Wissenschaft*, "science." Primitive languages offer similar facts. In the speech of the Tacana Indians of Bolivia, according to Dr. D. G. Brinton (*Stud. in S. Amer. Lang.*, 1892, p. 13), the terms *babe-quisa*, "to teach," *babe-tsua*, "to learn," *babe*, "to know," are all derivatives from the root *ba*, "to see." From *ba*, "to see," comes also the term *diaba* (*dia* = "to eat"), "to taste," literally, "to eat, seeing."

Such terms as *sharp* (whence "sharper"), *acute*, and their cognates in all languages, are self-explanatory, so common is it to consider the mind *keen*, *scharfsinnig*, etc. English *shrewd*, to which commercialism has given a somewhat higher meaning than it formerly possessed ("malicious, wicked, *shrew-like*," then "cunning, acute," etc.) goes back to the animal, whose Latin name *mus aranea* betrays its evil character in folk-thought. *Astute* is a derivative from the Latin *astus*, "craft, cunning," the etymology of which is uncertain,—perhaps "city bred." A very interesting knowledge-word is English *craft* ("skill, ability, trade") which in Middle English signified "might, power, ability, art, craft, deceit,"—and the corresponding M. H. G. adjective *crafti*, "skilful, sly," our *crafty*, "cunning, sly." The cognate Modern High German word *Kraft* signifies, like Dutch *Kracht* and Danish *kraft*, "power, strength, force," but the M. H. G. and O. H. G. word had the meanings "strength, power, force of an army, multitude, abundance" and the Anglo-Saxon *craeft*, besides these, meant also "mental capacity, art, science." The final etymology of *craft* is doubtful, but Skeat suggests kinship with *cramp*, and derivation from the Teutonic radical *krap*, "to draw forcibly together." If this etymology be true, it is curious that the verb "to cram" is cognate. *Craft* is evidently a word which has undergone, as Kluge (*Etym. Dict.*, p. 190) points out, specialisation within the mental sphere, the English *crafty* being the latest development.

Equally interesting, perhaps, is the old Latin word *sollers*, "intelligent, skilled, sagacious, cunning, wily, crafty," derived from *sollus*, "all, entire," and

ars, "art, faculty, skill, ability, science, profession," etc.; a term having much the same significance as *craft*. The literal signification of the Latin *ars* (compare *artus*, "limb, joint") is "skill in joining, putting together,"—we still say in English "to put two and two together." The "*art* of knowledge" is "putting things together."

Somewhat similar is the etymology of the Greek *τέχνη*, "art, skill, craft, cunning, sleight, trade," the primitive signification of which seems to have been "a way of making or doing something"—the word for "carpenter," *τέκτων*, is from the same root,—ultimately the radical *t—k*, "to shape, form, produce, generate."

The Modern High German *List* (cp. Gothic *lists*) signifies "craft, cunning, deceit," but in M. H. G. and O. H. G. it had the meanings "wisdom, prudence, slyness, cunning, art," etc.,—the cognate Middle English *liste* signified "craft, astuteness," Anglo-Saxon *list*, "art, propriety, cunning," Icelandic *list*, "prudence, skill in an art, propriety." As Kluge (p. 218) observes, the significance of the word fluctuates between "prudence" and "cunning," and the preterite—present *lais*—"I know," in Gothic, indicates the root which is also found in the German *lehren*, "to teach," *lernen* (cp. English *learn*). "to learn," etc. Cognate also are Gothic —*leis*, "knowing," —*leisei*, "knowledge," *laistjan*, "to teach," *laiseins*, "doctrine."

To the same stock belong also English *lore* (A. S., *lar*), German *Lehre*, and their cognates in other kindred tongues. The radical at the base of all these words is *lis* with the signification "to go through," "experience,"—compare the Latin *peritia*, "experience, skill," and *experiencia*, "knowledge, experience." The most primitive sense of *lis* is probably "to go," as the cognate German *Leiste*, which is the same as the English *last* (shoemaker's), Gothic *laists*, "track, goal," Anglo-Saxon *last* or *læst*, "footprint, track, forma," serve to indicate. The German verb *leisten*, "to perform, accomplish," O. H. G. and M. H. G., "to adhere to and execute an order, fulfil one's promise or duty," Anglo-Saxon *læstan*, "to perform, accomplish, hold, sustain, endure," belong here, as the Gothic *laistjan* (from *laists*), "to pursue, yield," proves. German *G(e)leise*, "rut, wheel-track," M. H. G. *leis* or *leise*, "trace, track," O. H. G. *leisa*, "track (of waggon)," are of the same stock, as is probably also Latin *lîra*, "furrow," when *dellrare*, "to be delirious, crazy, deranged, out of one's wit," literally, "to go out of the furrow." Of *lis*, the radical of all these knowledge-terms, Kluge says (p. 213): "This root has a constant tendency to pass from the sensuous meaning 'to go, follow,' into an intellectual notion."

Another Latin word for "craft, cunning, artifice, wile" is *dolus*, probably from Greek *δόλος*, with like meaning, which appears also in a great many compounds expressive of "subtlety, craftiness, wiliness, cunning, treachery, deceit." The radical of these words is seen in Greek *δέλεαπ*, "a bait," the original idea of the root *d—l* being "to catch with a bait (as fish)." So, the wily knowledge expressed in *dolus* comes ultimately from fishing or trapping.

A common Modern High German term for "wise, knowing, prudent, shrewd," is *klug*, the etymology of which is, apparently, unknown. In M. H. G. the word signified "fine, pretty, tender, superb, brave, polite, prudent, sly." In the Low German dialects (cf. Dutch *klock*,—the word does not occur in modern English) it has the meanings "prudent, brave, great, corpulent," and in Scandinavian *klökr* = "prudent, cunning." Probably the Middle English *glen*, "wise," Anglo-Saxon *glaw*, "sagacious," is the same word; perhaps also the Scotch *gleg*, "quick of eye," belongs here. The last may reveal the original signification.

There is a very interesting group of knowledge-words, represented by the English loan-words from Latin *apprehend*, *comprehend*, *perceive*, *conceive*, etc., whose very physical basis is revealed in the common expression, "I don't quite *grasp* (or *get*) your meaning." In Latin *apprehendere* signifies "to catch, lay hold of, take, seize, embrace," *comprehendere*, "to lay hold of, catch, apprehend, comprehend, comprise, embrace, perceive, observe, see, understand," etc., and the simpler *prehendere*, "to grasp, seize, catch, take, take in with the eye, seize, apprehend, comprehend." *Prehendere* (the Greek cognate is *χαυδέειν*, "to take in, hold, be able") is derived from the prefix *pre*, "before," *hendere*, "to seize, get," a word actually akin to the English *get*. So, when we *seize* a point in an argument, *grasp* the situation, or, in the colloquialism of the day, *get on* to anything, we are repeating the phenomena revealed to us by these etymologies. Indeed, what real difference is there between the Latin *apprehendisne* and the street Arab's "*D'ye catch on?*" And in quarters where the language of the street and the forum is tabooed we often hear it said: "I don't *catch* your meaning."

The chief component of *percipere* and *concipere*, which have in Latin both the physical and the psychical significations, is *capere*, "to take hold of, seize, grasp." So, the psychological terms *concept*, *percept*, *recept*, *apperception*, etc., go back to a physical basis. The German verb, *begreifen*, "to comprehend, understand, conceive," and the substantive *Begriff* "conception, idea, notion," are, in like manner derived from the radical represented by *greifen*, "to seize, grasp, lay hold, grip." In English we say "he has lost his *grip*," even with reference to things intellectual.

Like *klug* in German, *clever*, which in English signifies "skilful, dexterous," and as an Americanism "good-natured, with wits below smart,"—in English dialect with meanings including all of these, including "bright (intellectually),"—is of doubtful etymology; Skeat, with apparent justice, considers *clever* to be a metamorphosis of Middle English, "quick, active, nimble, agile," from Old French *delivre*, "quick," literally "freed" (from Latin *de, liber*). The oldest meaning of *clever* would seem to be "ready (able) to seize," which brings it into the category of *grasp*-words.

The English *understanding*, *to understand* and the Modern High German *Verstand* ("understanding, intelligence, sense, reason") *verstehen* ("to understand") are very interesting knowledge-terms, whose etymology has not been alto-

gether satisfactorily explained. In M. H. G. *verstant*, a rare word, signifies "explanation," while M. H. G. *verstandnisse*, O. H. G. *firstantnissi*, has the meanings, "intelligence, insight, understanding"—the verb, M. H. G. *verstān*, O. H. G. *firstān*, signifies "to perceive, see into, notice, understand." Of these words Kluge remarks (p. 377): "How the meaning can be derived from the root of *stehein* is not clear; it is usually related to Greek *ἐπίσταμαι*, 'understand,' compared with the root *sta*, 'to stand,'" English *understand* presents the same problem. Skeat, however, interprets the Anglo-Saxon *understandan* (from *under*, *standan*) as signifying, literally, "to stand under, or among," and hence "to comprehend," comparing for signification and etymology the Latin *intelligere*, from which comes *intellectus* (whence English *intellect*) *intelligencia* (whence English *intelligence*) and their derivatives in many languages of Europe. *Intelligere* signifies, literally, "to choose between" (*inter, legere*), the chief component, *legere*, having the meaning "to gather, pick up," probably as a bird does grains, seeds, etc.

Epistemology, the term by which the philosophers designate the "theory of knowledge," has as its first component the Greek *ἐπιστήμη*, "knowledge, understanding, skill, experience, wisdom, science," a derivative from the verb *ἐπισταμαι*, "to understand, be capable, know how," which is itself derived from the particle *ἐπί* and *ἰστημαι*, "to cause to stand, erect, establish, place, make fast, fix." The word *ἰστημαι* is lengthened from *στάω*, from the same Indo-European radical as English *stand*, German *stehen*, and Latin *stare*. There is thus abundant evidence to show that "where one stands," with reference to any matter, is a very ancient definition of his knowledge. From the Zapotec Indian to the modern epistemologist is a long way, but language has much of interest wherewith to beguile us as we go.

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